

**CULTURAL RESOURCES CONSTRAINTS ANALYSIS OF
THE 500-ACRE CROSSWINDS AT SOUTH LAKE,
BEXAR COUNTY, TEXAS**

Prepared for

CROSSWINDS AT SOUTH LAKE, L.P.
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INTRODUCTION

SWCA Environmental Consultants conducted a cultural resources constraints analysis for Crosswinds at South Lake, L.P. on a 500-acre tract located in southern Bexar County, Texas. The purpose of the constraints analysis was to gather available information on previously recorded archaeological surveys and sites within the property and to assess the potential for the occurrence of significant cultural resources. The goal was to provide information for project planning and development, as well as estimates on possible future archaeological work required for regulatory compliance.

This report documents archival research. An archaeological survey of the project area was not conducted as an element of this research. This constraints analysis does not constitute any form of archaeological clearance for the 500-acre project area, but may be used to coordinate future cultural resource compliance with city and/or state agencies.

DEFINITION OF STUDY AREA

The project area is located approximately 4 miles south of the SH 16 and Loop 410 intersection, west of SH 16, southwest of the city of San Antonio, Texas. The northern boundary of the 500-acre tract is Watson Lane and the southern boundary is the Medina River. The western boundary is an unimproved road that runs perpendicular to Watson Lane, and the eastern boundary is SH 16. The property is located on the Terrell Wells, Texas USGS 7.5-minute topographic quadrangle.

METHODS

The archaeological constraints analysis consisted of a background archaeological and environmental literature search of the property. An SWCA archaeologist searched the Texas Archaeological Sites Atlas (Atlas) online da-

tabase for any previously recorded surveys and historic or prehistoric archaeological sites located in or near the project area. In addition to identifying recorded archaeological sites, the review included the following types of information on the Atlas: National Register of Historic Places (NRHP) properties, State Archaeological Landmarks (SALs), Official Texas Historical Markers, Registered Texas Historic Landmarks (RTHLs), cemeteries, and local neighborhood surveys. The archaeologist also examined the following sources: the *Soil Survey of Bexar County, Texas*, the *Geologic Atlas of Texas*, and the Terrell Wells, Texas USGS 7.5-minute topographic map of the project area. Aerial photographs were reviewed to assist in determining whether any standing buildings are located on the property, utilizing maps and photos on the City of San Antonio's GIS Mapping Application, an online resource (<http://maps.sanantonio.gov/website/COSAMaps/viewer.asp>).

Utilizing this information, areas within the project area were assessed for their potential to contain archaeological and/or historical materials. High-probability areas were defined as locales that possess or have a high likelihood of containing cultural resources. These areas were generally identified by distinct landforms and deposits that have been shown in other regional surveys to contain archaeological sites (alluvial terraces along the Medina River, for instance). Moderate or low-probability areas are defined as locales where archaeological and/or historical resources/sites are likely absent or have limited potential to be preserved (i.e., upland settings or areas with intensive development).

RESULTS

GEOLOGY

The northern most portion of the project area is mapped as Pleistocene-age Leona Formation. These deposits consist of fine calcareous silt grading down into coarse gravel (Barnes 1983). Most of the center portion of the project area is mapped as Pleistocene-age Fluvial terrace deposits. These low terrace deposits consist of gravel, sand, silt, and clay (Barnes 1983). The southern portion of the tract below the upper terrace of the Medina River is mapped as Alluvium flood plain deposits (Barnes 1983).

SOILS

The soils of project area are part of three general soil associations. The majority of the northern project area is a part of the Houston Black-Houston association (Taylor et al. 1991). These soils are characterized as deep clayey soils over calcareous clay and marl. The southern project area along the flood plain of the Medina River is part of the Venus-Frio-Trinity association. Soils are characterized by deep calcareous soils in bottomlands and terraces (Taylor et al. 1991). A small western portion of the project area is part of the Lewisville-Houston Black association, characterized by deep calcareous clayey soils in old alluvium (Taylor et al. 1991).

The specific soils of the Houston Black-Houston association within the northern portion of the project area include Houston black clay, Webb fine sandy loam, Duval fine sandy loam, and Gullied Land. The Houston Black clay, terrace, 0 to 1 and 1 to 3 percent slopes, are found near the center and northeastern corner of the northern portion of the project area (Taylor et al. 1991). The Houston Black clay, terrace, 0 to 1 percent soils consist of a thick dark gray surface layer 40 inches thick.

It is calcareous and has a fine, blocky structure. The underlying material may vary from a clay loam to sandy loam in texture and from a reddish yellow and dark brown to light gray in color (Taylor et al. 1991). A water-bearing gravel layer usually occurs near the base of alluvial deposits. These soils occur as broad, smooth terraces and as broad areas of an old outwash plain (Taylor et al. 1991).

The Houston Black clay, terrace, 1 to 3 percent slopes, occurs adjacent to large drainage ways as long, narrow slopes (Taylor et al. 1991). These soils are more susceptible to water erosion than the Houston Black clay, terrace, 0 to 1 percent slopes. Soils consist of a dark gray surface layer, 34 inches thick, over a gray subsurface layer, 20 inches thick. The subsurface layer is a blocky, crumbly structure and contains few lime concretions (Taylor et al. 1991).

The Webb fine sandy loam, 1 to 3 percent slopes, is located within the northern portion of the tract between the Houston Black soils. The soils occur along major field drainages and streams as side slopes. The surface layer ranges from a fine sandy loam to sandy clay loam, and depending on the type and severity of erosion, it ranges from 0 to 10 inches in thickness. The thicker parts of the surface layer occur between gullies and rills. The subsoil is sandy clay, representative of the soil series (Taylor et al. 1991).

The Duval fine sandy loam, 1 to 3 percent slopes, is located on the northwestern corner of the tract and at the near the eastern boundary below the Webb soils. The soils consist of a fine sandy loam surface layer, 14 inches thick, and massive, porous sandy clay loam subsoil, 30 inches thick (Taylor et al. 1991).

The Gullied Land is located below the Duval and Houston Black soils on along the eastern boundary of the tract and extends towards the

center of the project area along the upper terrace of the Medina River. The Gullied Land divides the northern and southern portions of the tract. This type occurs where high terraces break to flood plains along rivers and streams (Taylor et al. 1991). The soils consist of strongly calcareous loam, clay loam, or silty clay derived from alluvium in a grayish-brown or light grayish-brown. The soil erodes off steep, exposed slopes very rapidly preventing the development of soil profiles (Taylor et al. 1991).

The specific soils in the southern portion of the project area include Venus clay loam, Gullied Land, and Frio clay loam. The Gullied Land is bordered by segments of Venus clay loam. The Venus clay loam, 0 to 1 percent slopes, is in a small area located near the western boundary of the tract (Taylor et al. 1991). These soils occur on smooth terraces 20 to 40 feet above the flood plains and are limy with many snail shells, worm casts, and fine pores. The surface layer is a clay loam, 16 inches thick, over a slightly less clayey loam subsurface layer, 20 inches thick (Taylor et al. 1991).

The Venus clay loam, 1 to 3 percent slopes, borders most of the Gullied land soils located near the center of the project area along the upper terrace of the Medina River. These soils occur between the terraces and upland soils or between the terraces and the floodplains, as gentle slopes (Taylor et al. 1991). The surface layer consists of a clay loam, 14 inches thick. The subsurface layer consists of a clay loam, less clayey than the surface layer, and is 20 inches thick (Taylor et al. 1991).

A small area of the Venus clay loam, 3 to 5 percent slopes is located between the Gullied Land soils and Venus clay loam, 1 to 3 percent slopes, in the center of the tract. These soils are extensive and occur as short, steep slopes between terrace benches or as side

slopes along creeks and along deeply entrenched field drainageways (Taylor et al. 1991). Soils consist of a grayish brown surface layer, 14 inches thick, over a very pale brown, limy light clay loam subsurface layer, 18 inches thick (Taylor et al. 1991).

The Frio clay loam, 0 to 1 percent slopes, is located along the Medina River. These soils occur mainly on low terraces bordering the flood plains of the San Antonio and Medina Rivers or on the flood plains and their chief tributaries (Taylor et al. 1991). In some places, the uneven surface layer is dissected by partly filled old stream channels. Soils consist of grayish-brown or dark grayish brown clay loam surface layer, 20 inches thick, that is limy with worm casts and snail fragments over a light brownish gray clay loam or loam, 5 inches thick. The underlying material ranges from sandy loam through stratified loam to clay loam, below 25 to 30 inches in depth. The water rounded limestone gravel is at 3 to 6 feet in depth (Taylor et al. 1991).

The western area of the tract is mapped as Lewisville silty clay, 0 to 1 and 1 to 3 percent slopes. These soils extend towards the center of the project area adjacent to the Gullied Land soils. The Lewisville silty clay, 0 to 1 percent slopes, along river and creeks as nearly level broad terraces (Taylor et al. 1991). The silty clay or light clay surface layer is 24 inches thick and the brown silty clay subsurface layer is 20 inches thick. The Lewisville silty clay, 1 to 3 percent slopes, occurs in long, narrow sloping areas that separate nearly level terraces from soils on the uplands (Taylor et al. 1991). The surface layer is a dark grayish brown light clay to silty clay loam, 20 inches thick, over a brown limy clay subsoil (Taylor et al. 1991).

BACKGROUND REVIEW

The results of the background review determined that the northern half of the project area has not been previously surveyed for archaeological resources and no previously recorded sites are located within the northern portion of the tract. However, the southern portion has been previously surveyed for archaeological resources and five archaeological sites (41BX346, 41BX858, 41BX860, 41BX861, 41BX862) are located within the project boundary. Two sites (41BX862, 41BX859) are adjacent to the eastern and southern project boundary, and 28 sites are located within 1 mile of the project area.

Most of the sites were discovered during numerous surveys conducted by various contractors for the Applewhite Reservoir project that was later cancelled. The largest of the surveys was conducted in 1981 and 1984 by archaeologists from the Center of Archaeological Research (CAR) at The University of Texas at San Antonio. Texas A&M University (TAMU) and Southern Methodist University (SMU) completed additional surveys and limited testing for the Applewhite Reservoir in the early 1990s (Houk et al. 2003; Figueroa and Tomka 2004). However, results of both surveys were not located with the exception of recorded site information on the Atlas. SMU also conducted historic archaeological investigations at various sites within the Applewhite Reservoir project in 2003 (Atlas, report abstract).

Several sites within 1 mile of the project boundary were newly recorded and revisited by subsequent surveys conducted for the San Antonio Water System (SAWS), San Antonio Parks and Recreation Department (SAPRD), and the Texas Parks and Wildlife Department (TPWD). The Medina River Park survey performed for the SAPRD by CAR archaeologists in 2003 is adjacent to the project area,

east of SH 16. Two other surveys conducted adjacent to the project and within 1 mile of the project boundary did not result in any newly recorded sites.

The five archaeological sites located within the Crosswinds at South Lake project area consist of one multi-component site (41BX346), three prehistoric sites (41BX858, 41BX861, 41BX862), and one historic site (41BX860) (Figure 1). These sites are located along the upper terrace of the Media River. The two sites located adjacent to the project area include a multi-component site (41BX863) and a historic site (41BX859).

Site 41BX346 has both prehistoric (Early and Middle Archaic) and historic components and was initially recorded during the 1981 survey conducted by CAR for the Applewhite Reservoir project. The western portion site is located along SH 16 on the eastern boundary of the project area. Most of the site lies east of SH 16. TAMU archaeologists revisited the site in 1990, and the eastern portion of the site was revisited during the Medina River Park survey in 2003. The Medina River Park survey investigations revealed low densities of both prehistoric and historic materials and evidence of land disturbances within the site boundaries (Figueroa and Tomka 2004). The results determined that the site does not contain significant research potential and further investigations for eligibility determination are unwarranted.

Sites 41BX858, 41BX861, and 41BX862 are prehistoric open campsites recorded by TAMU archaeologists in 1990. Based on the information provided from site records, it appears the investigations consisted of a pedestrian survey with no shovel testing. Site 41BX858 consists of a surface scatter of prehistoric artifacts that include debitage flakes, burned rock, an unidentified projectile point, and an end scraper (Atlas, 41BX858 site re-

cord). An intensive survey was recommended for the site to determine if there are intact cultural deposits or features.

Site 41BX861 contains areas with high densities of artifacts interspersed with low to moderate densities (Atlas, 41BX861 site record). Artifacts observed on the surface include debitage flakes, burned rock and mussel shell. Further investigations were recommended to determine if the site contains intact cultural deposits.

Site 41BX862 consists of light surface scatter of artifacts with an associated burned rock cluster (Atlas, 41BX862 site record). The burned rock cluster, designated as a possible hearth, has eroded out of the landform on which the site is located. Monitoring of the site was recommended.

Site 41BX860 is a residential historic complex with several surface structures and post-1930s debris scattered on the surface (Atlas, 41BX860 site record). The structures observed at the complex include three residential structures, several associated outbuildings, and a small dam or bridge with a pond. TAMU archaeologists suggest the site may have a business-related component associated with the warm sulphur spring located on the property. Archival and oral history research was recommended as well as architectural and archaeological investigations.

Sites 41BX863 and 41BX859 are adjacent to the project area just outside its boundaries. TAMU archaeologists recorded the sites in 1990. Site 41BX863 is located west of site 41BX862 outside of the western boundary of the project area and contains both prehistoric and historic components. The prehistoric component consisted of surface scatter of debitage and burned rock (Atlas, 41BX863 site record). Artifacts associated with the historic component include ceramics, lead shot,

nails, and glass. Additional testing was recommended as well as archival and oral history research. Site 41BX859 is located south of the project area and Medina River. The site consists of an early twentieth-century historic farmstead with standing structures and surface scatter (Atlas, 41BX859 site record). The structures observed at the site include a two-story house and barn. Based on the site description, the house may have been continuously remodeled since its initial construction (Atlas, 41BX859 site record). No further work or research is recommended for the site.

A total of 28 sites are located within 1 mile of the project area. Site type, component information, and recommendations for each site are included in Table 1. With the exception of site 41BX1519, all sites were recorded and/or tested during the Applewhite Reservoir survey projects and the Medina River Park survey. Archaeologists from CAR recorded site 41BX1519 during the Government Canyon survey for TPWD in 2001.

ARCHAEOLOGICAL ASSESSMENT

A review of soil maps, geology, and aeriels indicate that most of the property is in a moderate probability setting in regards to the potential for prehistoric cultural resources. The project area has been subject to numerous disturbances such as farming practices, vegetation clearing, and quarry excavation. Although the southern portion contains evidence archaeological remains, it is likely that the area has been impacted by the recent disturbances. The northern portion of the project area has been impacted by quarry excavation and extensive farming activities.

The geology of the southern portion is mapped as Alluvium flood plain deposits, which is subject to frequent flooding episodes. The Terrell Wells, Texas USGS 7.5-minute topographic map indicates the presence of a gravel

pit within the Medina River flood plain. The likelihood of discovering buried cultural deposits in this portion of the project area is minimal. However, additional survey and trenching may be required in undisturbed areas of the floodplain to determine if intact buried cultural deposits exist. Due to the nature of disturbances that have occurred in the area, any cultural deposits that exist may lack cultural integrity.

The boundary between the northern portion and the southern portion of the project area is marked by steep upper terrace overlooking the Medina River. Most of the sites recorded within the project area are located on the edge of the upper terrace. Due to the extent of various impacts, the current nature and integrity of the sites is unknown. A reassessment of the current conditions of the sites may be necessary to determine if further investigations are required for significance testing prior to impact.

The agricultural and quarrying practices in the northern portion of the property have diminished the possibility of encountering undisturbed cultural deposits. Soils in this setting are not aggrading, and repeated plowing continually mixes deposits. If sites are present in this setting, they are likely completely disturbed with no significant research value. However, since the area has never been formally surveyed, a survey of this northern portion may be required to identify any sites and confirm whether they retain any research value.

The aeriels indicate that there are standing structures within the project area; therefore, there is moderate potential for historic structures to be present. However, the age and significance of these structures can only be evaluated through fieldwork.

Based on this information, the scope of archaeological investigations for any possible cultural resource compliance required for development of the property would likely involve a pedestrian survey with shovel testing in the northern portion of the project area. In addition, a reassessment of previously recorded sites and additional survey in the undisturbed areas of the flood plain may be required in the southern portion of the project area.

Backhoe or mechanical trenching would be required in the alluvial setting along Medina River. The dynamic flooding episodes of Medina River may have resulted in the burial of prehistoric archaeological sites, and these cannot be discovered or explored with shovel testing. Regulatory agencies often require mechanical trenching in alluvial settings, however, the flood plain may contain cultural deposits that may lack integrity due to the nature of disturbances that have occurred. If historic structures are encountered during fieldwork, some limited historical research may be required to further explore the history of the property.

SUMMARY AND RECOMMENDATIONS

SWCA Environmental Consultants conducted a cultural resource constraints analysis for Crosswinds at South Lake, L.P. on a 500-acre tract of land located in southern Bexar County, Texas. The purpose of the constraints analysis was to gather available information on previously recorded archaeological surveys and sites within the property and to assess the potential for the occurrence of significant cultural resources.

The background review discovered that the northern portion of the project area has not been previously surveyed for cultural resources and does not contain previously recorded sites. The southern portion of the pro-

ject area contains five archaeological sites. Two additional sites are adjacent to its boundaries, and twenty-eight archaeological sites have been recorded within 1 mile of the property.

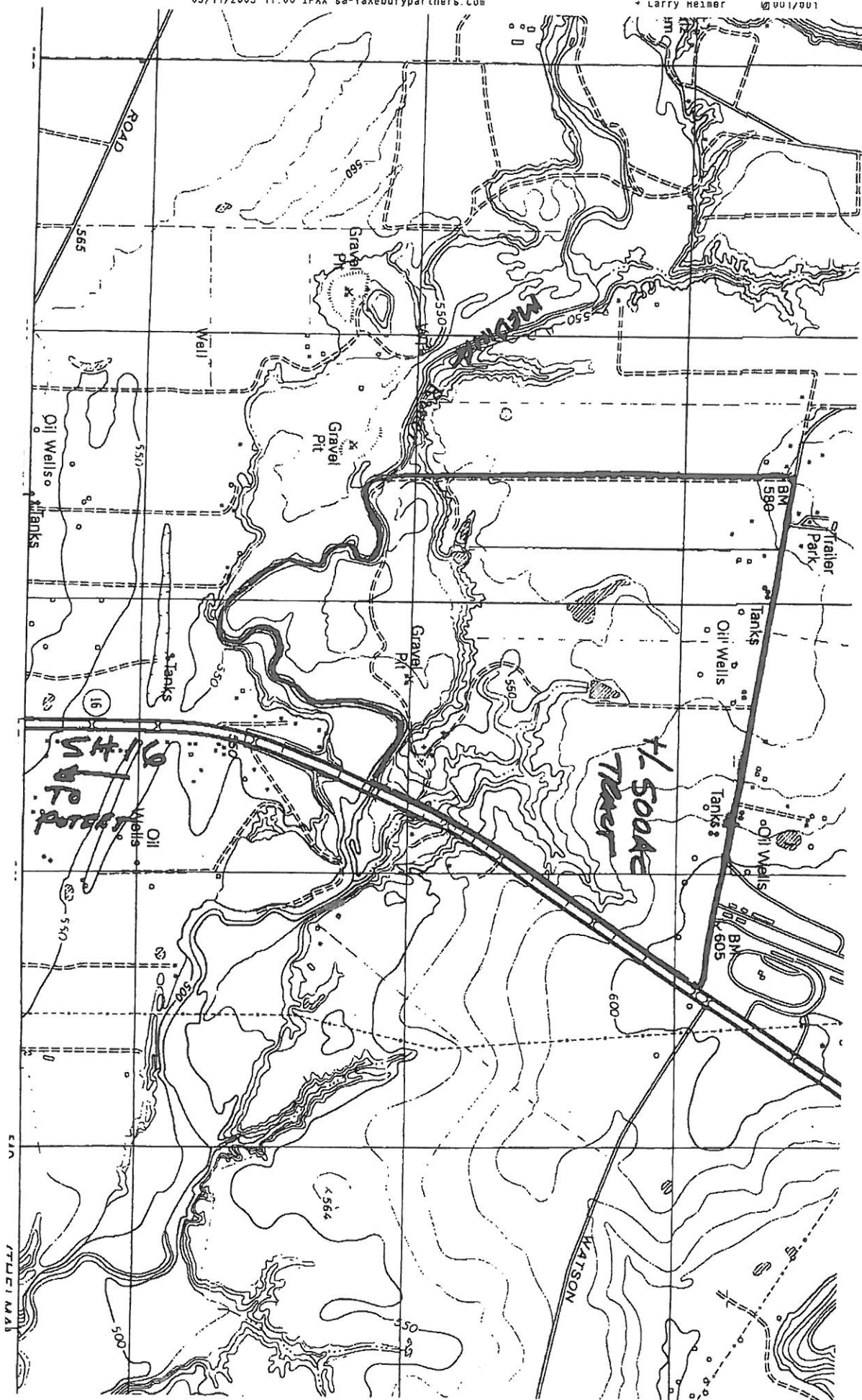
A review of soils, geology, aerials, and previous studies suggest the property has a varied potential for the occurrence of significant cultural resources. The majority of the project area has been subject to land disturbances that consist of agricultural practices, quarrying activities, and vegetation clearing. The northern portion of the project area, which is primarily used for agriculture, has a moderate probability for containing significant archaeological sites. However, a formal survey of the area has never been conducted and may require pedestrian investigations. The southern portion has a high probability of containing significant cultural resources based on the evidence of previously recorded sites in the area. The flood plain of the Median River has the potential to contain buried cultural deposits in areas undisturbed by modern impacts.

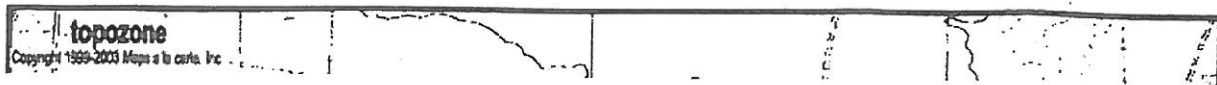
Should compliance with cultural resource regulations such as the National Historic Preservation Act or the Antiquities Code of Texas be required for any future development of the property, *it is likely to include a 100-percent pedestrian survey with shovel testing in undisturbed areas on the northern portion of the project area, a reassessment of previously recorded sites, and a survey with backhoe trenching in the undisturbed areas of the flood plain on the southern portion of the project area.* Trenching is a common component to archaeological surveys involving waterways such as the Medina River since the river's fluvial soil deposits have good potential for containing stratified buried sites.

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